



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,792	10/14/2003	James Vlaanderen	00868P0026US	2996

32116 7590 12/14/2005

WOOD, PHILLIPS, KATZ, CLARK & MORTIMER  
500 W. MADISON STREET  
SUITE 3800  
CHICAGO, IL 60661

EXAMINER
----------

ADAMS, GREGORY W

ART UNIT	PAPER NUMBER
----------	--------------

3652

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/684,792		VLAANDEREN ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Gregory W. Adams		3652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foote (US 2,656,058) in view of Babb (US 2001/0012480).

3. With respect to claim 1, Foote discloses a parallelogram linkage comprising short links 4, 31, 10 and long links 8, 9 and having one pivot pivoted to a frame 4, 6 defining a short link 4, 31 and a second pivot pivoted to a short link 10 joined to an object support 21. Foote discloses engaging an underlying terrain with an object support 21, but does not disclose a pair of parallelogram linkages for moving two movable elongated object supports.

4. Babb discloses an elongated vehicle frame, ground engaging means on an elongated vehicle frame, two movable elongated object supports 40, 50 and long and short links 26, 28, 30, 32, 51, 52, 53, 54, 55 which along with extendable motors 47, 56 move elongated object supports between a loaded position and an unloading position. Babb teaches transporting rows and tiers of hay bales from site to site because movable elongated object are not subject to snapping or breaking over strapping down bales. Para. [0002] – para [00013]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Foote to include a vehicle with movable elongated object supports and linkages, as per

the teachings of Babb, because straps when transporting hay bales from one site and delivering to a second site.

5. With respect to claims 2-3 & 6-7, Babb discloses both object supports are located to a same side and long links 32 of one pair are longer than long links 40 of another pair. Further, Babb discloses one object support is located one side and one to an opposite side. Babb teaches transporting rows and tiers of hay bales from site to site because movable elongated object are not subject to snapping or breaking over the preferred method to that time, straps. Para. [0002] – para. [00013]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Foote to include a vehicle with movable elongated object supports and linkages, as per the teachings of Babb, because straps when transporting hay bales from one site and delivering to a second site.

6. With respect to claim 5, Babb discloses that object supports 40, 50 rest on a frame. Babb teaches transporting rows and tiers of hay bales from site to site because movable elongated object are not subject to snapping or breaking over the preferred method to that time, straps. Para. [0002] – para [00013]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Foote to include a vehicle with movable elongated object supports and linkages, as per the teachings of Babb, because straps when transporting hay bales from one site and delivering to a second site.

7. With respect to claim 8-9, Babb discloses that lower object supports are shorter than upper object supports (FIG. 1 below), and discloses sharing a first pivot 14. It is

Art Unit: 3652

noted that Babb discloses eight (8) object supports such that two (2) lower object supports and linkages thereof share pivot 14, and long links 45 of upper most object support 40 are longer than long links 55 of lowermost object support 50. Babb teaches an apparatus that transports cylindrical objects in rows and tiers, with the ability to pivot rotatably object supports from a loaded position to an unloading position. Para. [0002] – para. [00013]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Foote to include shared linkages and object supports which are shorter and longer and longer uppermost long links, as per the teachings of Babb, to transport cylindrical objects in rows and tiers, with the ability to pivot rotatably object supports from a loaded position to an unloading position.

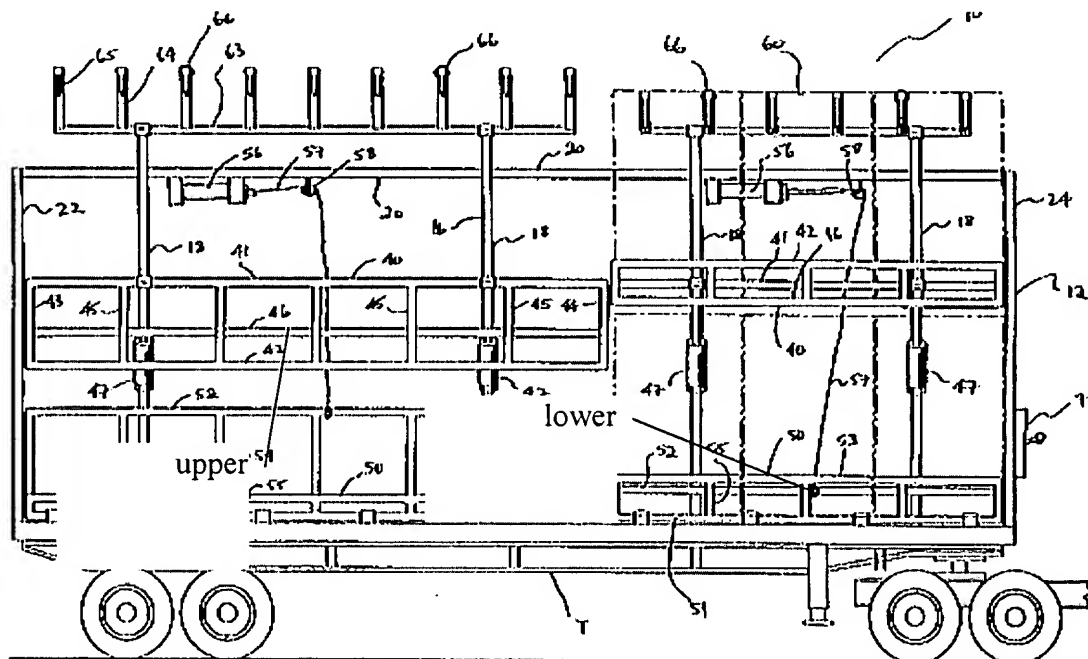


FIG. 1

Art Unit: 3652

8. With respect to claim 10, Foote discloses an extendable motor 13 interconnecting opposite corners.

9. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foote (US 2,656,058) and Babb (US 2001/0012480) in view of Basala (US 5,671,850). Basala discloses an object support comprising end plates 64 that define a short link and long links 68 to which the second two pivots are attached. Basala teaches modifying the object support of Foote to provide an improved storage rack apparatus, mountable to a movable rack for pivoting into an unload position or pivoting upwards to a loaded position, the end plates assisting long links 68 to pivot. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the object support of Foote to include end plates which define a short link, as per the teachings of Basala, such that an object support pivots into an unload position or pivoting upwards to a loaded position, the end plates assisting long links.

10. Claims 13 & 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foote (US 2,656,058) in view of Babb (US 2001/0012480).

11. With respect to claim 13, Foote discloses a parallelogram linkage comprising short links 4, 31, 10 and long links 8, 9 and having one pivot pivoted to a frame 4, 6 defining a short link 4, 31 and a second pivot pivoted to a short link 10 joined to an object support 21. Foote discloses engaging an underlying terrain with an object support 21, but does not disclose a pair of parallelogram linkages for moving two movable elongated object supports.

Art Unit: 3652

12. Babb discloses an elongated vehicle frame, ground engaging means on an elongated vehicle frame, two movable elongated object supports 40, 50 and long and short links 26, 28, 30, 32, 51, 52, 53, 54, 55 which along with extendable motors 47, 56 move elongated object supports between a loaded position and an unloading position, where a part of the frame forms a short link and a part of an object support 40, 50 forms a short link. Babb teaches transporting rows and tiers of hay bales from site to site because movable elongated object are not subject to snapping or breaking over strapping down bales. Para. [0002] – para [00013]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Foote to include a vehicle with movable elongated object supports and linkages, as per the teachings of Babb, because straps when transporting hay bales from one site and delivering to a second site.

13. With respect to claim 14, Babb discloses that lower object supports are shorter than upper object supports (FIG. 1 above), and discloses sharing a first pivot 14. It is noted that Babb discloses eight (8) object supports such that two (2) lower object supports and linkages thereof share pivot 14, and long links 45 of upper most object support 40 are longer than long links 55 of lowermost object support 50. Babb teaches an apparatus that transports cylindrical objects in rows and tiers, with the ability to pivot rotatably object supports from a loaded position to an unloading position. Para. [0002] – para. [00013]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Foote to include shared linkages and object supports which are shorter and longer and longer uppermost

Art Unit: 3652

long links, as per the teachings of Babb, to transport cylindrical objects in rows and tiers, with the ability to pivot rotatably object supports from a loaded position to an unloading position.

14. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Foote (US 2,656,058) and Babb (US 2001/0012480) in view of Ruhl (US 5,244,313). Ruhl discloses placement of a cylinder 12 within a long link channel 10 to secure piston-cylinder 12 movement in a prescribed direction, substantially perpendicular to the longitudinal centerline of the object support. Col. 4, Ins. 10-45. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Foote to include a cylinder within a long link channel, as per the teachings of Ruhl, to secure piston-cylinder movement in a prescribed direction, substantially perpendicular to the longitudinal center line of the object support.

15. Claims 16 & 18 are rejected under 35 U.S.C. 103(a) as being anticipated by Hagenbuch et al. (US 6,439,668) in view of Foote (US 2,656,058) and Babb (US 2001/0012480).

16. With respect to claim 16, referring to FIGS. 17-26 Hagenbuch et al. disclose a transporter and storage unit 110 having a frame 116, cross members, elongated stringer, upright element 120, cross members 121, linkages comprising four long links 180,184, four intermediate links 124,186,188 and short links 121,122,123, four (4) cradles 122,30, two for each side, stub shafts for connecting linkage, end plats 124 that define a short link. It is noted that Hagenbuch et al. presumes that the connection from the cradles 122,124,30 to linkages 18, 182 requires a stub shaft.



17. Foote discloses parallelogram linkages comprising short links 4, 31, 10 and long links 8, 9 and having one pivot pivoted to a frame 4, 6 defining a short link 4, 31 and a second pivot pivoted to a short link 10 joined to an object support 21, and may be formed of channels with a square cross section. Col. 3, Ins. 15-35. Foote discloses engaging an underlying terrain with an object support 21, but does not disclose a pair of parallelogram linkages for moving two movable elongated object supports. Foote teaches a vehicle loading and unloading mechanism with a pantograph linkage keeps the object support in a horizontal orientation for stability when loading and unloading a truck. Col. 3, Ins. 10-60; col. 4, Ins. 35-65. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the linkages of Hagenbuch to include parallelogram linkages, as per the teachings of Foote, to maintain an object support in a stable horizontal orientation.

18. Babb discloses a frame having eight (8) cradles to transport hay bales in a 2x2 orientation on a vehicle front and rear ends, wherein object supports 40, 50 articulate on long and short links to position cradle supports near the ground. It is noted that Hagenbuch discloses touching object supports on to the underlying terrain. Babb teaches 2x2 bale orientation for transporting rows and tiers of hay bales from site to site because movable elongated object are not subject to snapping or breaking over strapping down bales. Para. [0002-0013]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Hagenbuch to include a vehicle with movable elongated object supports and

Art Unit: 3652

linkages, as per the teachings of Babb, because straps when transporting hay bales from one site and delivering to a second site.

19. With respect to claim 18, referring to FIGS. 17-26 Hagenbuch et al. disclose a support member 122,30 are spaced bars 125, 126.

20. Claim 17 is rejected under 35 U.S.C. 103(a) as being anticipated by Hagenbuch et al. (US 6,439,668) in view of Foote (US 2,656,058), Babb (US 2001/0012480) and Ruhl (US 5,244,331).

21. Ruhl discloses placement of a cylinder 12 within a long link channel 10 to secure piston-cylinder 12 movement in a prescribed direction, substantially perpendicular to the longitudinal centerline of the object support. Col. 4, Ins. 10-45. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Hagenbuch et al. to include a cylinder within a long link channel, as per the teachings of Ruhl, to secure piston-cylinder movement in a prescribed direction, substantially perpendicular to the longitudinal center line of the object support.

### ***Response to Arguments***

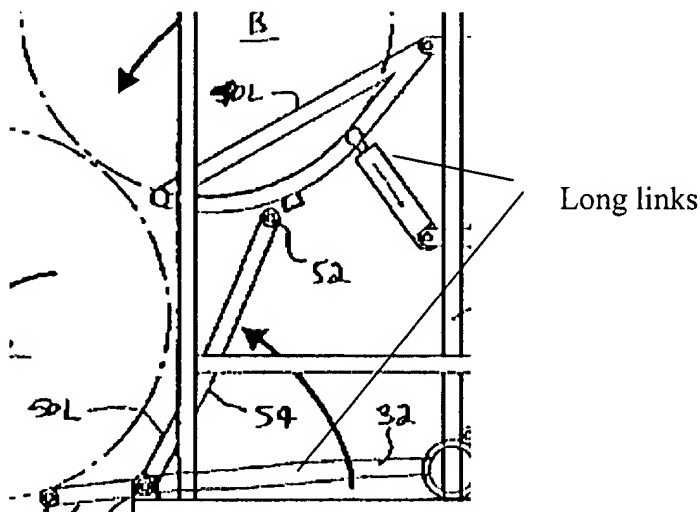
Applicant's arguments filed October 18, 2005 have been fully considered but they are not persuasive.

With respect to claim 1, in response to applicant's argument that its improper to combine Foote with Babb, the fact that applicant has recognized a disadvantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*,

227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Babb is analogous art for at least the reason that it teaches moving and supporting a load via a support having linkages connected to a vehicle.

With respect to claims 11-12, Applicant argues that end plates 60, 64 are not links. As they link linkage 68 to frame 22 and a tire support Basala discloses end plates defining links 60 & 64.

With respect to claim 13, Applicant argues that Foote does not disclose long links for on cradle being longer than long links for another cradle. Fig. 3 reproduced below shows long links and shorts links, with long links for cradle 50L longer than long links for cradle 40L.



With respect to claim 14, Applicant did not provide arguments, but likely intended to argue that Foote in view of Babb does not disclose object supports of different lengths. Babb discloses that lower object supports are shorter than upper object supports (FIG. 1 reproduced above), and discloses sharing a first pivot 14. It is noted that Babb discloses eight (8) object supports such that two (2) lower object supports

and linkages thereof share pivot 14, and long links 45 of upper most object support 40 are longer than long links 55 of lowermost object support 50. Because one is shorter, Babb discloses different lengths.

With respect to claim 15, Applicant argues that Ruhl's does not teach the claims and limitations of claims 13-14 is without merit because Ruhl modifies Foote by adding a channel.

With respect to claim 16, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant argues that the cited prior art does not disclose a transporter and storage unit. It is noted that Claim 16 recites merely an apparatus compared with claims 1 & 13 which recite a transporter and storage unit. Applicant argues that Hagenbuch in view of Foote and Babb does not disclose positions substantially engaged with terrain. With respect to paragraph 17 of the July 18, 2005 Non-final, Foote discloses engaging the underlying terrain such that an object can be moved from ground to vehicle using a parallelogram linkage. Further, Hagenbuch in view of Foote and Babb disclose an apparatus having an object support movable between positions overlying a frame and positions engaging a terrain using a four-bar parallelogram linkage having opposite links and a cradle, and first and second short links. Finally, Hagenbuch, Foote and Babb are analogous art for at least the reason of supporting and moving an object via an object support using linkages.

***Conclusion***

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory W. Adams whose telephone number is (571) 272-8101. The examiner can normally be reached on M-Th, 8:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on (571) 272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3652

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GWA



**EILEEN D. LILLIS**  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600